

**Insecticide Information Table.** Classes, chemicals, sample product names and mode of action of chemicals registered for mosquito control.

Chemical Class	Active Ingredient (Chemical)	Target Stage	Mechanism of Action	Example Commercial Product(s)
Organophosphates	Malathion	Adult	Inhibits enzyme responsible for breakdown of acetylcholine. This leads nervous system overstimulation, paralysis and death	Fyfanon ULV, Malathion ULV
	Naled	Adult		Dibrom ULV, Naled ULV
Synthetic Pyrethroids	Permethrin	Adult	Alters the functioning of voltage-gated sodium channels causing nerves to repeatedly fire, leading to paralysis and knockdown	Permethrin ULV, Permanone (various)
	Prallethrin	Adult		Zenivex E, Pyronyl 525
	Etofenprox	Adult		Zenivex ULV
	Resmethrin / Sumithrin	Adult		(older ULV adulticides)
Natural Pyrethrins	Pyrethrins (plant extract)	Adult	Causes nerve overstimulation leading to death	Merus 3.0, Pyrethrin ULV products
Pyrroles	Chlorfenapyr	Adult	Disrupts energy production by disrupting normal functioning of the mitochondria	Sylando 240 SC

ReMoa Tri (Triple-Action Adulticide)	Fenpropathrin (pyrethroid), Abamectin (macrocyclic lactone), C8910 (fatty acid)	Adult	<i>Fenpropathrin</i> : sodium channel disruption; <i>Abamectin</i> : increases activity of glutamate-gated chloride channels leading to paralysis; <i>C8910</i> : is a fatty acid which can disrupt membranes and alter respiration (novel mixture targeting resistant mosquitoes)	ReMoa Tri (novel space spray)
Bacterial Larvicides	<i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> (Bti)	Larval	Contains a toxin which damages cells lining the gut after ingestion, causing larva to stop feeding and die	VectoBac GS, WDG, Aquabac, dunks
	<i>Lysinibacillus sphaericus</i> (Bs)	Larval	Toxin which also disrupts the structure of larval gut leading to death	VectoLex CG, WDG
Insect Growth Regulators (IGRs)	Methoprene	Larval	Mimics juvenile hormone. This is an important hormone which must be reduced to low levels for molting. Therefore, it prevents larvae from maturing into adults	Altosid P35, XR Briquets
	Pyriproxyfen	Larval	Is an analog of Juvenile hormone preventing molting	Sumilarv, suite of IGR products
Spinosyn Larvicides	Spinosad	Larval	Activates a receptor (nicotinic acetylcholine receptor leading to paralysis and death	Natular 2EC, Natular G, XRT

Surface Oils / Films	Mineral oil, monomolecular films	Larval & pupal	Creates a physical barrier on the water surface. This leads to larval suffocation	BVA 2 Mosquito Larvicide Oil, GB 1111
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Sources: EPA, CDC, AMCA